

REMARKS

Status of the Claims

Claims 13-23 are pending in this application.

Claims 13-23 are rejected.

Claims 13, 15, 18-20 and 23 have been amended without prejudice.

Claims 24-34 are new.

Drawing Objections

The Office Action objects to the drawings under 37 CFR 1.84(p)(5) stating that they do not include the following reference sign mentioned in the descriptions: 32 (the Office Action states that it appears that in Fig. 2, 30 should be 32). The Office Action also states that corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to avoid abandonment of the application.

In response to this objection, Applicant respectfully submits the attached Replacement Sheet which replaces the reference sign "30" with "32" in Figure 2 as described in the specification. The Replacement Sheet which includes Figure 1-2 replaces the original sheet which included original Figures 1-2. Applicant submits that no new matter has been added and that support for the replacement sheet can be found throughout the specification as originally filed. Entry of the corrected drawing sheet is respectfully requested.

Specification Objections

The Office Action states that the disclosure is objected to because of the drawing objection.

In response to this objection, as previously argued, Applicant respectfully submits the attached Replacement Sheet which replaces the reference sign "30" with "32" in Figure 2. Therefore, removal of the objection is respectfully requested.

The Office action also states that the title of the invention is not descriptive and that a new title is required that is clearly directed.

In response to this objection, Applicant respectfully submits the replacement title which recites: AN ELECTRICALLY INDUCTIVELY CONTROLLED VALVE DEVICE FOR CONTROLLING FLUID FLOW AND A CORRESPONDING METHOD. Therefore, removal of the objection is respectfully requested. Entry of the replacement title is respectfully requested.

Applicant respectfully submits that support for these amendments can be found throughout the specification as originally filed. In addition, Applicant believes that no new matter has been introduced.

Claim Suggestions

The Office Action states that claim 18 has the following informalities: The term "a valve device" should be "the" or "said" since it has already been mentioned. The Office Action also states that appropriate correction is required.

Applicant respectfully submits that it is commonplace in granted United States Patents to find a "thing" claimed in a main-claim introduced as "A thing" in an appended sub-claim so that the wording of claim 18 appears to be permissible as it stands. However, in an effort to expedite prosecution, Applicant respectfully submits that

dependent claim 18 has been amended to recite: In a filler of a machine the output of which is filled containers filled with said fluid, a the valve device according to claim 13. Therefore, removal of the objection of claim 18 is respectfully requested.

Rejection of Claims 13-15 and 19-20 Under 35 U.S.C. § 102(b)

Claims 13-15 and 19-20 stand rejected under 35 U.S.C. §102(b) as being anticipated by U.S. Patent No. 4,782,860 to Sakaguchi et al. (hereafter "Sakaguchi"). Applicant requests reconsideration of the rejection based on the following remarks.

The Office Action states that Sakaguchi discloses a valve device for controlling fluid flow, having a hollow body bounding a flow path for the fluid through said valve device, a valve obturating member 3 and 4 in said flow path and moveable between a more obturating position for permitting lesser and greater flows of said fluid along said path, which flows urge said member in the sense from said more obturating position to said less obturating position (Figs. 1 or 3), said valve obturating member including magnetic portions 4, an electrically energizable inductor 5 which, while remaining stationary relative to said body and while electrically energized, acts upon said valve obturating member with a force to urge said valve obturating member in the sense from said less obturating position to said more obturating position. The Office Action states that there are no moving parts other than said valve obturating member. The Office Action also states that the method is seen as practiced by the apparatus.

The law is clear that anticipation requires that a single prior art reference disclose each and every limitation of the claim sought to be rejected. The law is also clear that a claim in dependent form shall be construed to incorporate all the limitations of the claim to which it refers.

Applicant respectfully submits that amended independent claims 13 and 19 of the present invention both require “a valve obturating member” and respective limitations. Sakaguchi does not disclose this limitation. As disclosed in Column 1, lines 42-68 of Sakaguchi, in a prior art flow control valve a ball-form valve body 3 co-operates with a valve seat 2a away from which it is urged by incoming pressurised fluid. By energization of the electromagnet 5, the throttle adjusting plate 4 can be attracted towards the electromagnet 5 and so urge the body 3 towards the valve seat 2a. By varying the electric current or voltage applied to the coil of the electromagnet 5, the attractive force acting upon the throttle adjusting plate 4 can be varied, so that the force urging the body 3 towards the valve seat can be continuously adjusted. Sakaguchi also discloses that, in its preferred embodiment, the body 3 is usually a steel ball, or it may be of a plastics material. See Col. 3, lines 37-52 of Sakaguchi. Applicant respectfully submits that the Office Action has improperly stretched the meaning of “member” in claims 13 and 19 of the present invention to encompass the two separate members 3 and 4 of Sakaguchi. Replacing the valve obturating member (10) of claims 13 and 19 by two such separate members of Sakaguchi would be contrary to an important aim of the present invention, which is to enable the valve device to be of very simple construction, with no moving parts other than the valve obturating member itself, as stated at lines 9 to 11 of page 4 of the present Specification. Applicant submits that Sakaguchi does not disclose that the two items 3 and 4 of Sakaguchi could be a single member. Thus, Applicant submits that Sakaguchi does not disclose the required valve obturating member and respective limitations of the present invention. Therefore, removal of the rejection and allowance of independent claims 13 and 19, and claims 14-15 and 20 depending respectively therefrom, is respectfully requested. In addition, in an effort to expedite prosecution,

Applicant respectfully submits new claims 24-34 to further specify a valve obturator in the form of a unit. Applicant submits that even if the Examiner still considers that the separate members 3 and 4 of Sakaguchi can still constitute a "member" in the Examiner's interpretation of claims 13 to 23 as hereby amended in the present application, Applicant also files herewith new claims 24 to 34 referring to a valve obturator in the form of a unit, to bring out the distinction even more clearly. Therefore, Applicant respectfully submits that new claims 24-34 are in condition for allowance and allowance is herein requested.

In further regard to independent claims 13 and 19 of the present invention, and new independent claims 24 and 30, Applicant respectfully submits that claims 13 and 19 have been amended to specify that the magnetic portions are encircled by the inductor. Sakaguchi does not disclose these limitations. The magnetic portions (at least the ring 18) of the present valve device are encircled by the inductor, and gives a significant advantage over Sakaguchi as will now be explained. In Sakaguchi, the magnetic portions upon which the electromagnet 5 acts are of the throttle adjusting plate 4 which is arranged axially spaced from the electromagnet 5. See Col. 1, lines 54-61 and Fig. 3 of Sakaguchi. Thus, the stroke of the plate 4 of Sakaguchi is necessarily very limited. Conversely, as shown in the present Figure 1, the magnetic portions 18 of the present valve device are encircled by the inductor 4 and so the stroke of the valve obturator 10 can be significantly greater than that of the body 3 and plate 4 of Sakaguchi. This can be particularly advantageous in circumstances where, say, a significant volume of a liquid such as milk or orange juice is to be filled rapidly into a container. Therefore, removal of the rejection of independent claims 13 and 19 and allowance of claims 13, 19, 24 and 30 is respectfully requested.

Applicant respectfully submits that claims 14-15 and 20, which include all of the limitations of amended independent claims 13 and 19 from which they depend respectfully, further defines the invention over the art cited by the Examiner. Thus, Applicant respectfully requests withdrawal of the rejection and allowance of dependent claims 14-15 and 20. Applicant also respectfully submits that new claims 25-29 and 31-34, which include all of the limitations of new independent claims 24 and 30 from which they depend respectfully, further defines the invention over the art cited by the Examiner. Therefore, Applicant submits that new claims 24-30 are in condition for allowance and allowance thereof is respectfully requested.

Rejection of Claims 13-15 and 19-20 Under 35 U.S.C. § 103(a)

Claims 13-15 and 19-20 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over U.S. Patent No. 3,758,071 to Anderson et al. (hereafter "Anderson") in view of U.S. Patent No. 4,782,860 to Sakaguchi et al. (hereafter "Sakaguchi"). Applicant requests reconsideration of the rejection based on the following remarks.

The Office Action states that Anderson discloses a valve obturating member 4 in said flow path (Fig. 1 of Anderson), magnetic portions, and an electrically energized inductor 23. The Office Action also states that Anderson lacks a control arrangement which is connected to said electrical supply arrangement and which serves to adjust the magnitude of the current supplied to said inductor by said supply arrangement and thereby to adjust said force. The Office Action states that Sakaguchi discloses a control arrangement which is connected to said electrical arrangement, and that it would have been obvious to adjust the magnitude of the current supplied to said inductor by said

supply arrangement and thereby to adjust said force of Anderson in order to provide the minimum needed force to close the valve.

Establishing a prima facie case of obviousness requires the reference teach or render obvious all the elements of the inventive combination of the rejected claims. Dependent claims set forth in the present application include all of the limitations of the claims from which they depend. Therefore, these combinations must also be taught or rendered obvious by the cited reference.

Applicant respectfully submits that Anderson whether taken alone or in combination with Shakaguchi fails to teach or render obvious the inventive combination of amended claims 13 and 19 of the present invention, which sets forth a valve obturating member in said flow path and movable between a more obturating position and a less obturating position for permitting lesser and greater flows of said fluid along said path, which flows urge said member in the sense from said more obturating position to said less obturating position, said valve obturating member including magnetic portions, an electrically energizable inductor which encircles said magnetic portions and which, while remaining stationary relative to said body and while electrically energized, acts upon said valve obturating member with a force to urge said valve obturating member in the sense from said less obturating position to said more obturating position, an electrical supply arrangement connected to said inductor, and a control arrangement which is connected to said electrical supply arrangement and which serves to adjust the magnitude of the current supplied to said inductor by said supply arrangement and thereby to adjust said force. As previously argued, Sakaguchi does not teach or render obvious a valve obturating member and magnetic portions encircled by an inductor. By contrast, Sakaguchi teaches two separate members 3 and

4, and any supposed magnetic portions of Sakaguchi upon which the electromagnet 5 acts are of the throttle adjusting plate 4 which is arranged axially spaced from the electromagnet 5. See Col. 1, lines 54-61 and Fig. 3 of Sakaguchi. Thus, as argued previously, the stroke of the plate 4 of Sakaguchi is necessarily disadvantageously very limited. When combined with Sakaguchi, Anderson still fails to remedy the deficiencies of Sakaguchi since Anderson teaches an axially moving valve obturating block 4 and the preferably fixed valve block 6 are both formed of magnetic material and an energizable coil 23 is mounted in the block 6 to attract the block 4 into flush engagement with the block 6. See Abstract, Col. 3, lines 3-14, and Fig. 1 of Anderson. Anderson teaches magnetic material of the valve block 4 at one axial end of the coil 23 and thus does not have any magnetic portions encircled by its inductor 6,23. *Id.* Thus, again, the stroke of the obturating block 4 is necessarily very limited. Similarly, the proposed references fail to teach or render obvious the inventive combination of new independent claims 24 and 30, which include a valve obturator in the form of a unit and an inductor which encircles magnetic portions of said obturator.

For all of the above reasons, the proposed combination of Anderson in view of Sakaguchi does not teach or render obvious amended independent claims 13 and 19 and new claims 24 and 30. When Anderson and Sakaguchi are combined the proposed combination fails to teach or render the inventive combination as set forth in independent claims 13, 19, 24, and 30 of the present invention. Therefore, removal of the rejection of claims 13, 19, 24, and 30 and allowance thereof is respectfully requested.

Claims 14-15, 20, 25-29, and 31-34 incorporate all of the limitations of independent claims 13, 19, 24, and 30 from which they depend respectively and further

define the invention over the art cited by the Examiner. Applicant respectfully submits that Anderson whether taken alone or in combination with Sakaguchi fails to teach or render obvious the inventive combinations of the features of claims 14-15, 20, 25-29, and 31-34 combined with claims 13, 19, 24, and 30 respectively. Therefore, removal of the rejection of claims 14-15 and 20 and allowance thereof is respectfully requested. In addition, new claims 25-29 and 31-34 are in condition for allowance and allowance thereof is respectfully requested.

Rejection of Claims 16 and 21 Under 35 U.S.C. § 103(a)

Claims 16 and 21 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over U.S. Patent No. 4,782,860 to Sakaguchi et al. (hereafter "Sakaguchi") in view of U.S. Patent No. 5,351,934 to Jensen et al. (hereafter "Jenson"). Applicant requests reconsideration of the rejection based on the following remarks.

The Office Action states that Sakaguchi lacks a plurality of energizable inductors. The Office Action also states that Jensen discloses a plurality of energizable inductors 26 and 28. The Office action states that it would have been obvious to use a plurality of energizable inductors as disclosed by Jenson in place of the single inductor of Sakaguchi as a matter of simple substitution and/or to provide a stronger magnetic field.

Establishing a prima facie case of obviousness requires the reference teach or render obvious all the elements of the inventive combination of the rejected claims. Dependent claims set forth in the present application include all of the limitations of the claims from which they depend. Therefore, these combinations must also be taught or rendered obvious by the cited reference.

Claims 16, 21, and new claims 27 and 32 incorporate all of the limitations of amended independent claims 13, 19 and new independent claims 24 and 30 from which they depend respectively and further specify a plurality of electrically energizable inductors, including said inductor, and respective limitations. When combined with Sakaguchi, Jensen still fails to remedy the deficiencies of Sakaguchi since Jensen teaches an inducting arrangement in which two axially spaced coils 26 and 28 with a permanent magnet 24 axially between them and axially outer pole pieces 40 and 46 are used to displace a poppet 14 axially. See Col. 2, lines 21-57 and Fig. 2 of Jensen. The Applicant respectfully submits that a person of ordinary skill in the art would not consider providing such a complicated induction arrangement to produce the axial movement of the plate 4 in Sakaguchi. Even if the Office Action is suggesting that it would have been obvious to replace the coil of the electromagnet 5 of Sakaguchi by two co-axial coils 26 and 28 in Jensen, such a replacement would appear to do nothing but unnecessarily increase the cost and complication of the simple arrangement for displacing axially the plate 4 in Sakaguchi and would be considered disadvantageous by a person of ordinary skill in the art. Therefore, removal of the rejection of claims 16 and 21 and allowance thereof is respectfully requested. In addition, Applicant respectfully submits that new claims 27 and 32 are in condition for allowance and allowance thereof is respectfully requested.

Rejection of Claims 16 and 21 Under 35 U.S.C. § 103(a)

Claims 16 and 21 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over U.S. Patent No. 3,758,081 to Anderson et al. (hereafter "Anderson") in view of U.S. Patent No. 4,782,860 to Sakaguchi et al. (hereafter "Sakaguchi") in view of U.S. Patent

No. 5,351,934 to Jensen et al. (hereafter "Jenson"). Applicant requests reconsideration of the rejection based on the following remarks.

The Office Action states that Anderson lacks a plurality of energizable inductors to constitute a linear motor. The Office action also states that Jensen discloses a plurality of energizable inductors 26 and 28 to constitute a linear motor. The Office Action states that it would have been obvious to use a plurality of energizable inductors as disclosed by Jensen in place of the single inductor of Anderson as a matter of simple substitution and/or to provide a stronger magnetic field.

Establishing a prima facie case of obviousness requires the reference teach or render obvious all the elements of the inventive combination of the rejected claims. Dependent claims set forth in the present application include all of the limitations of the claims from which they depend. Therefore, these combinations must also be taught or rendered obvious by the cited reference.

Claims 16, 21, and new claims 27 and 32 incorporate all of the limitations of amended independent claims 13, 19 and new independent claims 24 and 30 from which they depend respectively and further specify a plurality of electrically energizable inductors, including said inductor, and respective limitations. When combined with Anderson and Sakaguchi, Jensen still fails to remedy the deficiencies of Anderson in view of Sakaguchi since, as argued previously, Jenson teaches an inducting arrangement in which two axially spaced coils 26 and 28 with a permanent magnet 24 axially between them and axially outer pole pieces 40 and 46 are used to displace a poppet 14 axially. See Col. 2, lines 21-57 and Fig. 2 of Jensen. The Applicant respectfully submits that a person of ordinary skill in the art would not consider providing such a complicated induction arrangement to produce the axial movement of the plate 4

in Sakaguchi and the block 4 of Anderson. Even if the Office Action is suggesting that it would have been obvious to replace the coil of the electromagnet 5 of Sakaguchi by two co-axial coils 26 and 28 in Jensen or to replace the energizable coil 23 of the block 6 of Anderson by two co-axial coils 26 and 28 in Jensen, such a replacement would appear to do nothing but unnecessarily increase the cost and complication of the simple arrangement for displacing axially the plate 4 in Sakaguchi or the block 4 in Anderson, would be considered disadvantageous and therefore not obvious by a person of ordinary skill in the art. See Anderson Col. 1, line 66 – Col. 2, line 2 of Anderson. Therefore, removal of the rejection of claims 16 and 21 and allowance thereof is respectfully requested. In addition, Applicant respectfully submits that new claims 27 and 32 are in condition for allowance and allowance thereof is respectfully requested.

Rejection of Claims 17 and 22 Under 35 U.S.C. § 103(a)

Claims 17 and 22 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over U.S. Patent No. 4,782,860 to Sakaguchi et al. (hereafter "Sakaguchi") in view of U.S. Patent No. 5,351,934 to Jensen et al. (hereafter "Jenson") in view of U.S. Patent No. 6,230,606 to Sato (hereafter "Sato"). Applicant requests reconsideration of the rejection based on the following remarks.

The Office Action states that Sakaguchi lacks a linear encoder to determine the position of the valve. The Office Action also states that Sato discloses a linear encoder 19 to determine the position of the valve, and that it would have been obvious to use a linear encoder as disclosed by Sato in the valve of Sakaguchi in order to fix the position of the valve by varying the current supplied.

Establishing a prima facie case of obviousness requires the reference teach or render obvious all the elements of the inventive combination of the rejected claims. Dependent claims set forth in the present application include all of the limitations of the claims from which they depend. Therefore, these combinations must also be taught or rendered obvious by the cited reference.

Claims 17, 22 and new claims 28 and 33 incorporate all of the limitations of amended independent claims 13, 19 and new independent claims 24 and 30 from which they depend respectively and further requires a linear encoder connected to said control arrangement and determining the position of said valve obturator member. When combined with Sakaguchi and Jensen, Sato still fails to remedy the deficiencies of Sakaguchi in view of Jensen since nothing in the specification and figures of Sato teaches a linear encoder which is connected to said control arrangement and whereby the position of said valve obturating member along said flow path is determinable, as required by the present invention. Sato does not teach any valve the position of which is determined by use of the linear encoder 19, although there are many valves disclosed. The supposed linear encoder 19 of Sato appears to be used for detecting the displacement amount of a piston 7 accommodated in a cylinder 2 in order to feed an obtained detection signal to a piston speed controller 15. See Abstract, Fig. 1, and Col. 3, lines 1-8 of Sato. Although that controller 15 itself controls the positions of valves such as the selector valve 13 and speed controllers 11a and 11b which appear to be the equivalent of valves, the Applicant has been unable to find anywhere in Sato a disclosure that the linear encoder 19 determines the position of any one of those valves. The Applicant therefore respectfully requests that the Examiner indicate where, in Sato, use of the linear encoder 19 to determine the position of one of the valves is disclosed.

Applicant submits that the proposed combination does not teach or render obvious claims 17 and 22 combined with claims 13 and 19 respectively. Therefore, removal of the rejection of claims 17 and 22 and allowance thereof is respectfully requested. In addition, Applicant respectfully submits that new claims 28 and 33 are in condition for allowance and allowance thereof is respectfully requested.

Rejection of Claims 17 and 22 Under 35 U.S.C. § 103(a)

Claims 17 and 22 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over U.S. Patent No. 3,758,071 to Anderson et al. (hereafter "Anderson") in view of U.S. Patent No. 4,782,860 to Sakaguchi et al. (hereafter "Sakaguchi") in view of U.S. Patent No. 5,351,934 to Jensen et al. (hereafter "Jenson") in view of U.S. Patent No. 6,230,606 to Sato (hereafter "Sato"). Applicant requests reconsideration of the rejection based on the following remarks.

The Office Action states that Sakaguchi lacks a linear encoder to determine the position of the valve. The Office Action also states that Sato discloses a linear encoder 19 to determine the position of the valve, and that it would have been obvious to use a linear encoder as disclosed by Sato in the valve of Sakaguchi in order to fix the position of the valve by varying the current supplied.

Establishing a prima facie case of obviousness requires the reference teach or render obvious all the elements of the inventive combination of the rejected claims. Dependent claims set forth in the present application include all of the limitations of the claims from which they depend. Therefore, these combinations must also be taught or rendered obvious by the cited reference.

Claims 17, 22 and new claims 28 and 33 incorporate all of the limitations of amended independent claims 13, 19 and new independent claims 24 and 30 from which they depend respectively and further requires a linear encoder connected to said control arrangement and determining the position of said valve obturator member. When combined with Anderson, Sakaguchi and Jensen, Sato still fails to remedy the deficiencies of Sakaguchi in view of Jensen since nothing in the specification and figures of Sato teaches a linear encoder which is connected to said control arrangement and whereby the position of said valve obturating member along said flow path is determinable, as required by the present invention. Sato does not teach any valve the position of which is determined by use of the linear encoder 19, although there are many valves disclosed. The supposed linear encoder 19 of Sato appears to be used for detecting the displacement amount of a piston 7 accommodated in a cylinder 2 in order to feed an obtained detection signal to a piston speed controller 15. See Abstract, Fig. 1, and Col. 3, lines 1-8 of Sato. Although that controller 15 itself controls the positions of valves such as the selector valve 13 and speed controllers 11a and 11b which appear to be the equivalent of valves, the Applicant has been unable to find anywhere in Sato a disclosure that the linear encoder 19 determines the position of any one of those valves. The Applicant therefore respectfully requests that the Examiner indicate where, in Sato, use of the linear encoder 19 to determine the position of one of the valves is disclosed. Applicant submits that the proposed combination does not teach or render obvious claims 17 and 22 combined with claims 13 and 19 respectively. Therefore, removal of the rejection of claims 17 and 22 and allowance thereof is respectfully requested. In addition, Applicant respectfully submits that new claims 28 and 33 are in condition for allowance and allowance thereof is respectfully requested.

Rejection of Claims 18 and 23 Under 35 U.S.C. § 103(a)

Claims 18 and 23 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over U.S. Patent No. 4,782,860 to Sakaguchi et al. (hereafter "Sakaguchi") in view of U.S. Patent No. 3,604,480 to Reichert et al. (hereafter "Reichert"). Applicant requests reconsideration of the rejection based on the following remarks.

The Office Action states that Sakaguchi lacks a mention of using the valve in a filler of a machine to fill containers, and that Reichert discloses containers at the outlet of the valve. The Office Action also states that it would have been obvious to use containers as disclosed by Reichert in the system of Sakaguchi in order to store the fluid valved.

Establishing a prima facie case of obviousness requires the reference teach or render obvious all the elements of the inventive combination of the rejected claims. Dependent claims set forth in the present application include all of the limitations of the claims from which they depend. Therefore, these combinations must also be taught or rendered obvious by the cited reference. Furthermore, a prima facie case of obviousness cannot be established where one or more of the references in the proposed combination teaches away from the proposed combination. *In re Grassili* 713 F.2d 731, 743, 218 USPQ 769, 779 (Fed Cir. 1983).

Claims 18, 23 and new claims 29 and 34 incorporate all of the limitations of amended independent claims 13, 19 and new independent claims 24 and 30 from which they depend respectively and further requires using the valve device in a filler of a machine the output of which is containers filled with said fluid. When combined with Sakaguchi, Reichert still fails to remedy the deficiencies of Sakaguchi since Sakaguchi teaches away from the proposed combination of Sakaguchi in view of Reichert. As

made clear in lines 14 and 19 of column 1 Sakaguchi is concerned with a fluid control valve used in a fluid circuit for intentionally moving or driving fluid equipment. Thus, a person of ordinary skill in the art would not expect the flow control valve of Sakaguchi to be suitable for filling containers. A glance at the drawings of Sakaguchi would immediately tell a person of ordinary skill that the valve is unsuitable for that purpose, for the reason which will now be explained. In filling containers, it is usual to arrange for the fluid to flow in a desired general direction and not for the fluid to be arranged to flow oppositely to that direction. Reichert illustrates the point, where the liquid enters at 11 and flows generally downwards into the bottle shown. However, in Sakaguchi, as illustrated in both Figures 1 and 3, immediately downstream of the valve seat 2a, the fluid flows in the opposite direction to its input direction. Thus, a person of ordinary skill in the art would appreciate that it would be impractical to apply Reichert to Sakaguchi because the plate 4, which is essential to the operation of Sakaguchi would prevent the input fluid of Sakaguchi from being continued to be led in the same general direction, as required by Reichert. Thus, a prima facie case of obviousness cannot be established since one or more of the references in the proposed combination teaches away from the proposed combination. Therefore, removal of the rejection of claims 18 and 23 and allowance thereof is respectfully requested. In addition, Applicant respectfully submits that new claims 29 and 34 are in condition for allowance and allowance thereof is respectfully requested.

Rejection of Claims 18 and 23 Under 35 U.S.C. § 103(a)

Claims 18 and 23 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over U.S. Patent No. 3,758,071 to Anderson et al. (hereafter "Anderson") in view of U.S.

Patent No. 4,782,860 to Sakaguchi et al. (hereafter "Sakaguchi") in view of U.S. Patent No. 3,604,480 to Reichert et al. (hereafter "Reichert"). Applicant requests reconsideration of the rejection based on the following remarks.

The Office Action states that Anderson lacks a mention of using the valve in a filler of a machine to fill containers, and that Reichert discloses using the valve in a filler of a machine to fill containers. The Office Action also states that it would have been obvious to use containers as disclosed by Reichert in the system of Anderson in order to be able to store the fluid valved.

Establishing a prima facie case of obviousness requires the reference teach or render obvious all the elements of the inventive combination of the rejected claims. Dependent claims set forth in the present application include all of the limitations of the claims from which they depend. Therefore, these combinations must also be taught or rendered obvious by the cited reference. Furthermore, a prima facie case of obviousness cannot be established where one or more of the references in the proposed combination teaches away from the proposed combination. *In re Grassili* 713 F.2d 731, 743, 218 USPQ 769, 779 (Fed Cir. 1983).

Claims 18, 23 and new claims 29 and 34 incorporate all of the limitations of amended independent claims 13, 19 and new independent claims 24 and 30 from which they depend respectively and further requires using the valve device in a filler of a machine the output of which is containers filled with said fluid. When combined with Anderson and Sakaguchi, Reichert still fails to remedy the deficiencies of Sakaguchi. As argued previously, Sakaguchi teaches away from the proposed combination of Sakaguchi in view of Reichert. Applicant respectfully submits that Andersen, as explained at lines 24 to 28 of column 1, is concerned with applications where valve-

controlled equipment is required to operate in a remote location in which it cannot readily be serviced, particularly in underwater, air or space applications where electrical power is at a premium. It will be appreciated that the valve device of claim 18 and 23, especially as now amended, is not for controlling equipment but is for controlling the flow of the fluid to be filled into the containers. Thus, a person of ordinary skill in the art would not expect to use the valve of Andersen in a filler. Therefore, removal of the rejection of claims 18 and 23 and allowance thereof is respectfully requested. In addition, Applicant respectfully submits that new claims 29 and 34 are in condition for allowance and allowance thereof is respectfully requested.

CONCLUSION

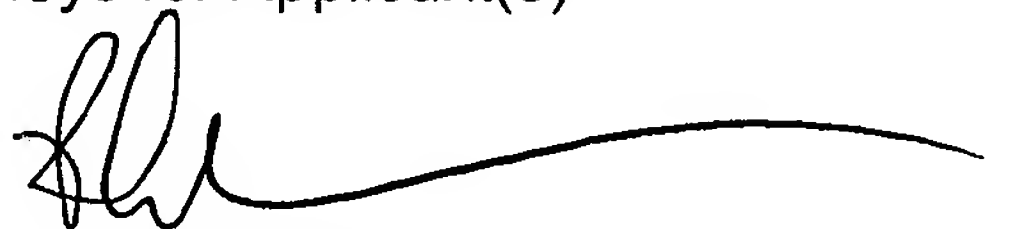
It is respectfully submitted that in view of the above amendments and remarks all issues as set forth in the Office Action have been properly addressed. Therefore, Applicant submits that the pending claim is properly allowable, which allowance is respectfully requested.

The Examiner is invited to telephone the Applicant's undersigned attorney at (248) 364-4300 if any unresolved matters remain.

Respectfully submitted,

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